antenna of said portable radio terminal and said external antenna, said coupling circuit being out of contact with said portable radio terminal with respect to DC components when the portable radio terminal is secured in said body;

a connecting member arranged in said body for connecting said external power and the portable radio terminal together to supply power from said external power to the portable radio terminal;

a mounting member movably connected to said body and operating in conjunction with the installing of the portable radio terminal in said body and including a first connector for communication from said external apparatus; and

a second connector installed on the portable radio terminal communication with said external apparatus when connected with said first connector.--

REMARKS

Claims 1-5 and 7-10 remain in this application having been amended hereby. Claims 6 and 11-15 have been canceled without prejudice or disclaimer and claims 16-19 have been added hereby.

The discrepancy noted by the Examiner in the Preliminary Amendment at page 2, line 25 filed December 17, 1996 has been corrected in this Preliminary Amendment.

In the parent of this application claims 1, 4, 5, 7, 8, and 10 were rejected under 35 U.S.C. § 102(e) as being anticipated by Pottala et al.

The present invention is directed to an apparatus for coupling a portable radio terminal to an external antenna. Coupling between the radio terminal and the apparatus is improved over known systems by including a reflective element near the coupling element. This reflective element improves coupling, as shown by comparing curves a and b in Fig. 5.

The arrangement of the reflective element is shown, for example, in Fig. 4. The reflective element 21 is electrically connected with an element which forms a ground plane 4 and is disposed along the antenna 6 of the radio terminal a predetermined distance, S2, from the coupling element 2.

The coupling element 2 and reflective element 4 define two planes. These planes are substantially parallel to each other and are arranged along the axis of the antenna. It is this arrangement of the coupling and reflecting elements that creates improved coupling over known devices.

As shown in Fig. 9, and as taught at page 15 of the specification, the coupling element 2 and reflection element 21 may be formed with a U-shaped cross section to more easily accommodate the antenna of a portable radio terminal.

Claims 1-5 and 6-10 have been amended to more clearly recite the relation of the reflective element to

the coupling element. Newly added claims 16-18 also recite this feature.

Pottala et al. shows an entirely different apparatus for coupling an external antenna to the antenna of a portable telephone.

As shown in Figs 2 and 3, a coupling element 240 is disposed near an antenna and is surrounded by a cylindrical grounded element. The cylindrical ground element is completely closed around the antenna and keeps the energy emitted by the antenna "substantially contained" within the conductor. Col. 3, lines 24-28.

The apparatus of Pottala et al. is more cumbersome than the present invention because a closed conductive chamber must be formed around the antenna. Such an arrangement requires a complicated mechanical assembly that must be opened and closed each time the telephone is coupled to the apparatus.

The present invention, on the other hand, functions by merely arranging coupling and reflective elements at predetermined positions along the antenna. As shown in Fig. 9 of the present invention, the coupling and reflecting elements may be formed in a u-shaped trough so that the antenna is simply placed in the apparatus.

Because coupling devices, such as the one taught by the present invention, are often used by automobiles drivers, a simple mechanism for inserting and retrieving a portable telephone is critical to the functionality of the device. Drivers may need to insert

or remove the telephone while driving without looking at the coupling device. The added complexity of opening and closing the coupling chamber of Pottala et al. would diminish its effectiveness for this type of application, as compared to a coupling device taught by the present invention.

Pottala et al. fails to show or suggest a coupling mechanism in which a reflective element is arranged a predetermined distance along an antenna axis from a coupling element, as recited in the amended and newly added claims. For at least this reason Pottala et al. fails to show or suggest the present invention.

Accordingly, in light of the amendments made to the claims hereby, as well as the above remarks, it is respectfully submitted that an antenna coupling apparatus, as taught by the present invention, and as recited in the amended and newly added claims, is neither shown nor suggested by the reference cited in the parent to this application.

It is hoped that this Preliminary Amendment will facilitate an early examination of the application on its merits.

Respectfully submitted,

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JHM:dmcd